

1. A polymerization temperature test element for a polymerization device, in particular in the field of dental restoration, the device having an energy source for irradiating a mass,

characterized in that:

5 the test element (10) comprises a base element (20) having a central region (12) to be filled with the mass to be hardened by irradiation; and temperature indicating means for indicating when a target polymerization temperature has been reached during irradiation.

10 2. The polymerization temperature test element as set forth in claim 1 wherein the temperature indicating means includes a support strip (30) provided with color-temperature indicators (32, 34) which change colors at discrete temperatures.

15 3. The polymerization temperature test element as set forth in claim 2 wherein the base element (20) has a circumferential wall (28), and wherein the support strip (30) is mounted on the wall (28).

20 4. A polymerization temperature test element for a polymerization device for polymerizing a mass of the type, in particular, for polymerizing a mass in the form of a dental product, the polymerization device having an energy source for irradiating the mass with one or both of light radiation and thermal radiation to effect polymerization of the mass; comprising:

25 a base element (20);
a receipt region (12) carried by the base element (20) and operable to receive a mass to be polymerized in response to the application of energy from the irradiating source, the base element (20) and the receipt region (12) being configured so as to be subjected to the respective light and thermal radiation emitted by the energy source to effect polymerization of the mass received by the receipt region (12); and
30 temperature indicating means for indicating that at least one discrete temperature has been reached during irradiation of the mass.

5. The polymerization temperature test element according to claim 4, wherein the base element (20) includes a floor surface (26), and the receipt region is disposed centrally of the base element (20) and extends beyond the floor surface.
10. The polymerization temperature test element according to claim 5, wherein the receipt region (20) extends beyond the floor surface a distance between 5 to 20 mm and, in particular, is between 8 to 10 mm.
15. The polymerization temperature test element according to claim 4, wherein the receipt region (12) has a substantially cylindrical shape.
20. The polymerization temperature test element according to claim 4, wherein the receipt region (12) is covered by a removable, preferably light impermeable, foil (16) to completely enclosing the receipt region (12).
25. The polymerization temperature test element according to claim 4, wherein the base element (20) includes at least one temperature indicating means (32, 34) having a color indicia, the color indicia of each color-temperature indicator (32, 34) having the characteristic that at least one of its brightness and its original color changes and, in particular, changes in an irreversible manner, upon approaching up to, at the least, reaching, a predetermined release temperature unique to the respective color-temperature indicator (32, 34).
30. The polymerization temperature test element according to claim 9, wherein the base element (20) includes a plurality of color-temperature indicators (32, 34) each of which is individually supported on a generally strip-shaped strip support element (30), and the strip support element (30) is connected to the base element (20).
11. The polymerization temperature test element according to claim 10, wherein the strip support element (30) is formed of paper.

12. The polymerization temperature test element according to claim 10, wherein the base element (20) includes a floor surface and a peripheral wall surface which extends in orientation perpendicular to the floor surface, and wherein the strip support element (30) is mounted on the wall surface of the base element (20).

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13. The polymerization temperature test element according to claim 9, wherein each color-temperature indicator (32, 34), upon reaching its unique release temperature, changes from its original, preferably white, color or brightness to a different, preferably black, color or brightness.

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14. The polymerization temperature test element according to claim 9, wherein the release temperatures of the color-temperature indicators (32, 34) increase at a uniform temperature gradation of a selected one of 2°C, 3°C, and a temperature up to 6°C.

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15. The polymerization temperature test element according to claim 14, wherein the release temperatures of the color-temperature indicators (32, 34) are in the temperature range between 90°C and 120°C.

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16. The polymerization temperature test element according to claim 14, wherein the release temperatures of the color-temperature indicators (32, 34) increase at a uniform temperature gradation of 1°C.

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17. The polymerization temperature test element according to claim 9, further comprising a cover (35) which shields the color-temperature indicators (32, 34) from being irradiated with light while permitting irradiation of the mass.

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18. A method for polymerizing a dental restoration product, comprising the following steps:

providing a test element having a base element with peripheral temperature indicating means and a centrally located receipt region;

disposing the dental restoration product to be polymerized in the receipt region;
irradiating the dental restoration product from an energy source to effect polymerization of the dental restoration product; and
5 observing an indication on a polymerization temperature test element (10) from the temperature indicating means which indicates that at least one discrete temperature has been reached during the irradiation of the dental restoration product.

10 19. A polymerization device for polymerizing a dental restoration product, comprising:
an energy source for irradiating the dental restoration product with one or both of light radiation and thermal radiation to effect polymerization of the dental restoration product;
15 means forming an interior volume with a planar surface on which the dental restoration product to be polymerized is disposed; and
a polymerization temperature test element 10 disposed generally centrally on the planar surface, the polymerization temperature test element (10) being configured so as to be subjected to the respective light and thermal radiation emitted by the energy source to effect polymerization of the dental restoration product to be polymerized and the polymerization temperature test element (10) being operable to indicate that at least one discrete temperature has been reached during the 20 irradiation of the dental restoration product.